

09538036

SEQ ID NO: 6

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	2208	100.0	420	20	AAW81358	Human 7-transmembr
2	2208	100.0	420	21	AAY99930	HLWAR77 polypeptid
3	2208	100.0	420	21	AAY79375	Human neuropeptide
4	2204	99.8	420	21	AAB07426	Amino acid sequenc
5	2115	95.8	408	21	AAY76882	Human NPY-Y7 recep
6	1730.5	78.4	417	21	AAY79377	Rat neuropeptide F
7	1719	77.9	336	20	AAW67774	Partial human 7-tr
8	1719	77.9	336	21	AAY99931	HLWAR77 polypeptid
9	1666	75.5	405	21	AAY76883	Mouse NPY-Y7 recep
10	1061	48.1	428	21	AAY56887	Human B5 receptor
11	1060	48.0	430	21	AAY93151	Novel human G-prot
12	1060	48.0	430	21	AAY79376	Human neuropeptide
13	1024	46.4	432	21	AAY93146	Novel rat G-protei
14	1024	46.4	432	21	AAY79373	Rat neuropeptide F
15	984	44.6	432	21	AAY56886	Rat B5 receptor po
16	525.5	23.8	444	20	AAV03649	Human 7-transmembr
17	525.5	23.8	444	22	AAB61969	Human HCRTR2 polyp
18	522.5	23.7	444	22	AAB61968	Canine wild-type H
19	519.5	23.5	460	22	AAB61970	Rat HCRTR2 polypep
20	502	22.7	431	21	AAV94993	Human secreted pro
21	502	22.7	431	22	AAB74773	Human G protein-co
22	502	22.7	431	22	AAB48963	Human G protein-co
23	501.5	22.7	402	17	AAW06124	Neuropeptide recep
24	500	22.6	431	21	AAV71309	Human orphan G pro
25	500	22.6	431	21	AAB02843	Human G protein co
26	499.5	22.6	425	19	AAW80456	G-protein coupled
27	499.5	22.6	425	22	AAB67489	Amino acid sequenc
28	499.5	22.6	425	22	AAB67079	Human HFGAN72 rece
29	495.5	22.4	423	19	AAW81460	Human G-protein co
30	494	22.4	431	21	AAB02853	Human G protein co
31	492.5	22.3	423	18	AAW34512	G protein coupled
32	491.5	22.3	423	18	AAW32797	Human derived long
33	476.5	21.6	369	17	AAW06125	Neuropeptide recep
34	476.5	21.6	377	17	AAW06126	Neuropeptide recep
35	476.5	21.6	389	19	AAW80805	Amino acid sequenc
36	465	21.1	381	21	AAV56888	Human Y2 receptor
37	462.5	20.9	381	16	AAR78273	Rat hippocampal ne
38	460.5	20.9	381	16	AAR78272	Rat hippocampal ne
39	460	20.8	381	16	AAR78271	Human hippocampal
40	460	20.8	381	19	AAW41710	Rhesus monkey neur
41	446	20.2	428	18	AAW29104	Enhanced CCK-A/gas
42	445.5	20.2	444	14	AAR38890	Sequence encoded b
43	445.5	20.2	444	18	AAW21567	LETO rat cholecyst
44	445.5	20.2	444	22	AAB66618	Rat pancreatic CCK
45	444.5	20.1	383	21	AAB14324	Rhesus Y1 receptor

ALIGNMENTS

RESULT 1
AAW81358
ID AAW81358 standard; Protein; 420 AA.
XX
AC AAW81358;
XX
DT 30-MAR-1999 (first entry)
XX
DE Human 7-transmembrane receptor HLWAR77.
XX
KW Human; transmembrane receptor; antagonist; infection; bacterium; fungus;
KW protozoan; virus; HIV; pain; cancer; anorexia; bulimia; asthma; ulcer;

KW Parkinson's disease; heart failure; hypotension; hypertension; asthma;
KW urinary retention; osteoporosis; angina pectoris; myocardial infarction;
KW allergy; benign prostatic hypertrophy; neurological disorder.
XX
OS Homo sapiens.
XX
PN EP884387-A2.
XX
PD 16-DEC-1998.
XX
PF 09-JUN-1998; 98EP-0304580.
XX
PR 13-JAN-1998; 98US-0006140.
PR 11-JUN-1997; 97US-0049332.
PR 02-DEC-1997; 97US-0067253.
XX
PA (SMIK) SMITHKLINE BEECHAM CORP.
XX
PI Elshourbagy N, Sathe G;
XX
DR WPI; 1999-026581/03.
DR N-PSDB; AAV68484.
XX
PT New DNA encoding 7-trans-membrane receptor polypeptide HLWAR77 -
PT used to treat, diagnose and prevent infections, pain, cancers,
PT anorexia, asthma, Parkinson's disease, acute heart failure,
PT osteoporosis, ulcers, allergies and psychotic disorders
XX
PS Claim 11; Page 8-9; 27pp; English.
XX
CC This sequence represents the human 7-transmembrane receptor HLWAR77.
CC The protein can be used to isolate agonists and antagonists. These can
CC be used as active agents in the treatment of infections (e.g. bacterial,
CC fungal, protozoal and viral infections, particularly HIV-1 or HIV-2),
CC pain, cancers, anorexia, bulimia, asthma, Parkinson's disease, acute
CC heart failure, hypotension, hypertension, urinary retention,
CC osteoporosis, angina pectoris, myocardial infarction, ulcers, asthma,
CC allergies, benign prostatic hypertrophy and psychotic and neurological
CC disorders.
XX
SQ Sequence 420 AA;

Query Match 100.0%; Score 2208; DB 20; Length 420;
Best Local Similarity 100.0%; Pred. No. 1.5e-223;
Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MNEKWDNTNSSENWHPIWNVNNDTKHHLYSDINITYVNYYLHQHQPVAAIFIISYFLIFFLCM 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1 mnekwdtntssenwhpiwnvndtkhlysdinityvnyylhqpqvaaiifiisyflifflcm 60

Qy 61 MGNNTVVCFIVMRNKHMHVTNLFILNLAIISDLVGIFCMPITLLDNIIAGWPFGNTMCKI 120
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 61 mgntvvvcfivmrnkhmhvtndlfilnlaisdlluvgifcmpitlldniiagwpfgntmcki 120

Qy 121 SGLVQGISVAASVFTLVAIAVDRFCVVPFKPKLTIKTAFFVIIWVLAITIMSPSAV 180
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 121 sglvqgisvaasvftlvaiaavdrfqcvvpfkpkltiktaffviimiiwvlaitimspsav 180

Qy 181 MLHVQEEKYYRVRLNSQNKTSPVYWCREDWPNCMRKIYTTVLFANIYLAPLSLIVIMYG 240
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 181 mlhvqeeekyyrvrlnsqnktspvywcrcdwpnqemrkiyttvlfaniylaplslivimyg 240

Qy 241 RIGISLFRRAAVPHTGRKNQEWHVVSRRKKQKIIKMLLIVALLFILSWLPLWTLMMMLSDYA 300
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 241 rigislfraavphtgrknqewhvvsrrkkqkiikmllivallfilswlplwtlmmmlsdy 300

Qy 301 DLSPNELQIINIYIYPFAHWLAFGNSSVNPIIYGFFNENFRRGFQEAFQLQLCQKRAKPM 360
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 301 dlspnelqiiniyiypfahwlafgnssvnpiiygffnenfrrgfqeafqlqlcqkrapm 360

Qy 361 EAYALKAKSHVLINTSNQLVQESTFQNPNGETLLYRKS A E K P Q Q E L V M E E L K E T T N S S E I 420
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 361 eayalkakshvlintsnqlvqestfqnpnghgetllyrksaekpqqelvmeelkettnssei 420

RESULT 2
AAY99930
ID AAY99930 standard; Protein; 420 AA.
XX
AC AAY99930;
XX
DT 16-OCT-2000 (first entry)
XX
DE HLWAR77 polypeptide #1.
XX
KW G-protein coupled receptor family; HLWAR77; bacterial; fungal; viral;
KW infection; HIV; cancer; diabetes; asthma; Parkinson's disease;
KW heart failure; 7TM receptor; human.
XX
OS Homo sapiens.
XX
PN WO200031107-A1.
XX
PD 02-JUN-2000.
XX
PF 17-NOV-1999; 99WO-US27282.
XX
PR 19-NOV-1998; 98US-0195517.
XX
PA (SMIK) SMITHKLINE BEECHAM CORP.
PA (SMIK) SMITHKLINE BEECHAM PLC.
XX
PI Sathe GM, Elshourbagy NA, Ames RS, Sarau HM, Foley JJ;
PI Chambers JK;
XX
DR WPI; 2000-400024/34.
DR N-PSDB; AAA61230.
XX
PT HLWAR77 nucleic acids and polypeptides useful for treating a range of
PT diseases, e.g. Parkinson's disease, asthma, cancers and osteoporosis -
XX
PS Claim 1; Page 14; 47pp; English.
XX
CC The present sequence is a G-protein coupled receptor (or 7TM) protein
CC referred to as HLWAR77. The DNA encoding this sequence was cloned using
CC 2 oligonucleotides (AAA61232 and AAA61233). These oligonucleotides were
CC designed using an EST homologous to the 7TM superfamily. A ligand
CC binding assay was used to screen HLWAR77 for ligands. The peptides
CC A-18-F-NH₂ and F-8-F-NH₂ (AAY99932 and AAY99933) were found to be
CC ligands for the receptor. The HLWAR77 polypeptides and nucleic acids may
CC be used for the treatment of a wide range of diseases including
CC bacterial, fungal and viral infections, HIV, cancer, diabetes, asthma,
CC Parkinson's disease, heart failure and other disorders associated with
CC G-protein coupled receptors. They may also be used to identify agonists
CC and antagonists of HLWAR77 which may be used to correct imbalances in
CC the expression or activity of the polypeptide.
XX
SQ Sequence 420 AA;

Query Match 100.0%; Score 2208; DB 21; Length 420;
Best Local Similarity 100.0%; Pred. No. 1.5e-223;
Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MNEKWDTNSSENWHPIWNVNNDTKHHLYSDINITYVNYYLHQPVAAIFIISYFLIFFLCM 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1 mnekwdtnssenwhpiwnvndtkhhlysdinityvnyylhqpqvaaiifiisyflifflcm 60

Qy 61 MGNTVVCFIVMRNKHMHVTNLFILNLAIISDLVGIFCMPITLLDNIIAGWPFGNTMCKI 120
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 61 mgntvvvcfivmrnkhmhvtnlfiinlaisdlvgifcmpitlldniiagwpfgntmcki 120

Qy 121 SGLVQGISVAASVFTLVAIAVDRFCVYPFKPKLTIKTAFVIIIMIIWLAITIMSPSAV 180
|||
Db 121 sglvqgisvaasvftlvaiaavdrfqcvypfkpkltiktafviiimiiwvlaitimspav 180

Qy 181 MLHVQEKKYYRVRLNSQNKTSPVYWCREDWPNCQEMRKIYTTVLFANIYLAPLSLIVIMYG 240
|||
Db 181 mlhvqeeekyyrvrlnsqnktspvywcredwpncqemrkiyttvlfaniylaplslivimyg 240

Qy 241 RIGISLFRRAAVPHTGRKNQEWHVVSRRKKQKIIKMLLIVALLFILSWLPLWTLMMLSDYA 300
|||
Db 241 rigislfraavphtgrknqewhvvsrrkkqkiikmllivallfilswlplwtlmmmlsdy 300

Qy 301 DLSPNELQIINIYIYPFAHWLAFGNSSVNPIIYGFFNENFRRGFQEAFQLQLCQKRAKPM 360
|||
Db 301 dlspnelqiiniyiypfahwlafgnssvnpiiygffnenfrrgfqeafqlqlcqkrapm 360

Qy 361 EAYALKAKSHVLINTSNQLVQESTFQNPNGETLLYRKSAEKPQQELVMEELKETTSSEI 420
|||
Db 361 eayalkakshvlintsnqlvqestfqnpnghetllyrksaeqpqqelvmeelketttssei 420

RESULT 3

AAV79375

ID AAV79375 standard; Protein; 420 AA.

XX

AC AAV79375;

XX

DT 01-AUG-2000 (first entry)

XX

DE Human neuropeptide FF (NPFF2) receptor.

XX

KW Neuropeptide FF receptor; NPFF2 receptor; human; antiinflammatory;
KW antiasthmatic; antidiabetic; immunostimulant; immunosuppressive;
KW nootropic; neuroprotective; analgesic; anoretic; antipsychotic;
KW antiaddictive; antimigraine; hypertensive; hypotensive; cardiant;
KW antiasthmatic; therapy; G protein coupled receptor.

XX

OS Homo sapiens.

XX

FH	Key	Location/Qualifiers
FT	Domain	44..71
FT		/note= "transmembrane domain I"
FT	Domain	80..104
FT		/note= "transmembrane domain II"
FT	Domain	123..141
FT		/note= "transmembrane domain III"
FT	Domain	160..180
FT		/note= "transmembrane domain IV"
FT	Domain	220..243
FT		/note= "transmembrane domain V"
FT	Domain	272..297
FT		/note= "transmembrane domain VI"
FT	Domain	315..340
FT		/note= "transmembrane domain VII"
FT	Modified-site	8
FT		/note= "N-glycosylated"
FT	Modified-site	20
FT		/note= "N-glycosylated"
FT	Modified-site	31
FT		/note= "N-glycosylated"
FT	Modified-site	198
FT		/note= "N-glycosylated"
FT	Modified-site	156
FT		/note= "O-phosphorylated"
FT	Modified-site	254
FT		/note= "O-phosphorylated"
FT	Modified-site	266
FT		/note= "O-phosphorylated"

XX

PN WO200018438-A1.

XX
PD 06-APR-2000.
XX
PF 24-SEP-1999; 99WO-US22384.
XX
PR 25-SEP-1998; 98US-0161113.
PR 22-FEB-1999; 99US-0255368.
XX
PA (SYNA-) SYNAPTIC PHARM CORP.
XX
PI Gerald CPG, Jones KA, Bonini JA, Borowsky B;
XX
DR WPI; 2000-293017/25.
DR N-PSDB; AAZ94667.
XX
PT Nucleic acid encoding a mammalian neuropeptide FF (NPFF) receptor,
PT useful for treatment of e.g pain, obesity, diabetes, hypertension,
PT hypotension, hypoglycemia, respiratory disorders
XX
PS Claim 19; Fig 9; 253pp; English.
XX
CC The present sequence is that of human neuropeptide FF (NPFF2)
CC receptor, as deduced from a cDNA clone (see AAZ94667) isolated
CC from a human spleen cDNA library. Highest levels of NPFF2 RNA
CC are found in the placenta, indicating a role in gestational
CC regulation. NPFF2 is also expressed in the central nervous system
CC and peripheral tissue. It may be involved in modulation of learning
CC and memory and in the regulation of fear, pain and analgesia, and
CC may provide a target for treatment of depression, anxiety, phobias
CC and mood disorders. Localisation to the caudate/putamen implies
CC regulation of dopaminergic systems and a role in the regulation of
CC extrapyramidal motor systems. The invention provides rat and
CC human NPFF polypeptides and polynucleotides, vectors, host cells,
CC antibodies, nucleic acid probes, antisense oligonucleotides,
CC transgenic animals, methods of isolating mammalian NNPF receptors,
CC methods of treating an abnormality associated with NPFF receptor
CC activity, methods of determining binding of compounds to NPFF
CC receptors, methods of identifying agonists and antagonists of NPFF
CC receptors, and the agonists and antagonists obtained. Claimed
CC methods of treating an abnormality that is alleviated by
CC increasing/decreasing NPFF activity involve administering an NPFF
CC receptor agonist/antagonist. The abnormality is a lower urinary
CC tract disorder, an epinephrine release disorder, a gastrointestinal
CC disorder, irritable bowel syndrome, a cardiovascular disorder, an
CC electrolyte balance disorder, diuresis, hypertension, hypotension,
CC diabetes, hypoglycemia, a respiratory disorder, asthma, a
CC reproductive function disorder, an immune disorder, an endocrine
CC disorder, a musculoskeletal disorder, a neuroendocrine disorder, a
CC cognitive disorder, a memory disorder, a sensory modulation and
CC transmission disorder, a motor coordination disorder, a sensory
CC integration disorder, obesity, pain, psychotic behaviour,
CC morphine tolerance, nicotine addiction, opiate addiction,
CC affective disorder or migraine (all claimed).
XX
SQ Sequence 420 AA;

Query Match 100.0%; Score 2208; DB 21; Length 420;
Best Local Similarity 100.0%; Pred. No. 1.5e-223;
Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 MNEKWDTNSSENWHPIWNVNNDTKHHLYSDINITYVNYYLHQHQVAAIFIISYFLIFFLCM 60
Db 1 mnekwdtnssenwhpiwnvndtkhhlysdinityvnyylhqpqvaaiifiisyflifflcm 60
Qy 61 MGNTVVCFIVMRNKHMHTVTNLFILNL AISDLLVGIFCMPITLLDNIIAGWPFGNTMCKI 120
Db 61 mgntvvcfivmrnkhmhtvtnlfilnlaisdlvgifcmpitlldniiagwpfgntmcki 120
Qy 121 SGLVQGISVAASVFTLVAIAVDRFQCVVYPFKPKLTIKTA FVIIIMIIWVLAITIMSPSAV 180
Db 121 sglvqgisvaasvftlvaiavdrfqcvvypfkpkltiktafviiimiiwvlaitimspsav 180

Db	121	sglvqgisvaasvftlvaiavdrfqcgvvpfkpkltiktafviiimwiwlaitimspsav	180
Qy	181	MLHVQEEKYRYVRLNSQNKTSPVYWCREDWPQNEMRKIYTTVLFANIYLA PLS LIVIMYG	240
Db	181	mlhvgeekyyrvrlnsqnktspvywcredwpngemrkiyttvlfaniylaplslivimyg	240
Qy	241	RIGISLFR A AVPHTGRKNQEWHVVSRKKQKIIKMLLIVALLFILSWLPLWT L MLMSDYA	300
Db	241	rigislfr a avphtgrknqe w hvvsrkkqkii k mllivallfil s wlplwt l mlmsdy a	300
Qy	301	DLSPNELQIIN IY IY P FAHWLAFGNSSVNPIIY G FFNEN F R R GFQEA F QLQLCQKRAKPM	360
Db	301	dlspnelqiiniyiyipfahwlafgnssvnpiiygffnenfr rg fqea f qlqlcqkrakpm	360
Qy	361	EAYALKAKSHVLINTSNQLVQESTFQNPHGETL Y R K SAEK P QQELVMEELKETTN S EI	420
Db	361	eayalkakshvlintsnqlvqestfqnphgetlyrksaekpqql g elvmeelkett n sei	420

RESULT 1
A41738
neuropeptide Y receptor - fruit fly (*Drosophila melanogaster*)
N;Alternate names: G protein-coupled receptor PR4
C;Species: *Drosophila melanogaster*
C;Date: 16-Sep-1992 #sequence_revision 16-Sep-1992 #text_change 20-Apr-2000
C;Accession: A41738
R;Li, X.J.; Wu, Y.N.; North, R.A.; Forte, M.
J. Biol. Chem. 267, 9-12, 1992
A;Title: Cloning, functional expression, and developmental regulation of a neuropeptide Y receptor from *Drosophila melanogaster*.
A;Reference number: A41738; MUID:92112730
A;Accession: A41738
A;Molecule type: mRNA
A;Residues: 1-449 <LIA>
A;Cross-references: GB:M81490; NID:g157996; PIDN:AAA28727.1; PID:g157997
C;Genetics:
A;Gene: FlyBase:NepYr
A;Cross-references: FlyBase:FBgn0004842
C;Superfamily: neuropeptide Y receptor
C;Keywords: appetite; G protein-coupled receptor; transmembrane protein

SUMMARIES

Result	Query					Description
	No.	Score	Match	Length	DB	ID
1	2208	100.0	420	4	Q9NR49	Q9nr49 homo sapien
2	2204	99.8	522	4	Q9Y5X5	Q9y5x5 homo sapien
3	1730.5	78.4	417	11	Q9EQD2	Q9eqd2 rattus norv
4	1060	48.0	430	4	Q9GZQ6	Q9gzq6 homo sapien
5	1024	46.4	432	11	Q9EP86	Q9ep86 rattus norv
6	522.5	23.7	444	6	Q9TUP7	Q9tup7 canis famil
7	499.5	22.6	425	4	Q9HBV6	Q9hbv6 homo sapien
8	492.5	22.3	423	4	Q9NYM4	Q9nym4 homo sapien
9	492.5	22.3	424	4	Q9P1Y8	Q9ply8 homo sapien
10	485	22.0	600	5	Q9VW75	Q9vw75 drosophila
11	479	21.7	422	6	Q9TTQ9	Q9ttq9 canis famil
12	479	21.7	452	5	Q9VB87	Q9vb87 drosophila
13	470.5	21.3	429	5	P92045	P92045 lymnaea sta
14	463.5	21.0	385	13	Q9DDN6	Q9ddn6 gallus gall
15	460.5	20.9	381	11	Q9ERC0	Q9erc0 rattus norv
16	460	20.8	381	6	Q9GK74	Q9gk74 macaca mula
17	459	20.8	381	4	Q9UE67	Q9ue67 homo sapien
18	457	20.7	384	6	Q9TSI1	Q9tsi1 sus scrofa
19	455.5	20.6	540	5	Q9VRM0	Q9vrm0 drosophila
20	451.5	20.4	375	13	Q57463	Q57463 brachydanio
21	451.5	20.4	397	5	Q9NHA4	Q9nha4 boophilus m
22	444.5	20.1	383	6	Q9GK75	Q9gk75 macaca mula
23	442.5	20.0	463	11	Q9EPJ7	Q9epj7 mus musculu
24	440	19.9	374	13	Q9YHX1	Q9yhx1 gadus morhu
25	438.5	19.9	465	5	O44426	O44426 lymnaea sta
26	433.5	19.6	377	13	Q73733	Q73733 brachydanio
27	427.5	19.4	370	4	Q75194	Q75194 homo sapien
28	427.5	19.4	440	5	Q9N324	Q9n324 caenorhabdi
29	421.5	19.1	678	5	Q94736	Q94736 stomoxys ca
30	419.5	19.0	373	13	Q73734	Q73734 brachydanio
31	418	18.9	452	11	Q9JKN0	Q9jkn0 mus musculu
32	417	18.9	394	5	Q9U721	Q9u721 drosophila
33	414	18.8	521	5	Q9VAD2	Q9vad2 drosophila
34	412	18.7	398	4	Q9UDE7	Q9ude7 homo sapien
35	408.5	18.5	411	13	Q9W6I3	Q9w6i3 gallus gall
36	404	18.3	398	4	Q9UDE6	Q9ude6 homo sapien
37	403.5	18.3	375	6	Q97505	Q97505 sus scrofa
38	401	18.2	504	5	Q9VGX8	Q9vgx8 drosophila
39	396.5	18.0	380	5	Q9NFW2	Q9nfw2 lymnaea sta
40	394.5	17.9	380	5	Q9NFW0	Q9nfw0 lymnaea sta
41	390.5	17.7	380	5	Q9NFW1	Q9nfw1 lymnaea sta
42	388.5	17.6	475	5	Q9VNM1	Q9vnm1 drosophila
43	388	17.6	457	5	Q18534	Q18534 caenorhabdi
44	386	17.5	380	5	Q9NFW3	Q9nfw3 lymnaea sta
45	385.5	17.5	372	11	Q9Z2D4	Q9z2d4 cavia porce

ALIGNMENTS

RESULT 1
Q9NR49
ID Q9NR49 PRELIMINARY; PRT; 420 AA.
AC Q9NR49;
DT 01-OCT-2000 (TrEMBLrel. 15, Created)
DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT 01-MAR-2001 (TrEMBLrel. 16, Last annotation update)
DE G-PROTEIN COUPLED RECEPTOR HLWAR77.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Elshourbagy N.A., Ames R.S., Fitzgerald L.R., Foley J.J., Chambers J.,
 RA Szekeres P., Schmidt D.B., Buckley P.T., Dytko G.M., Murdock P.R.,
 RA Tan K.B., Shabon U., Nuthuleganti P., Wang D.Y., Wilson S.,
 RA Bergsma D.J., Sarau H.M.;
 RT "Cloning and characterization of the human HLWAR77, a G-protein
 coupled receptor.";
 RL Submitted (APR-2000) to the EMBL/GenBank/DDBJ databases.
 DR EMBL; AF257210; AAF87078.1; -.
 DR InterPro; IPR000276; -.
 DR Pfam; PF00001; 7tm_1; 1.
 DR PRINTS; PR00237; GPCRRHODOPSN.
 DR PROSITE; PS00237; G_PROTEIN_RECECTOR; UNKNOWN_1.
 KW Receptor.
 SQ SEQUENCE 420 AA; 48686 MW; 7A47C4CEEC1DBE07 CRC64;

Query Match 100.0%; Score 2208; DB 4; Length 420;
 Best Local Similarity 100.0%; Pred. No. 2.1e-161;
 Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

 Qy 1 MNEKWDTNSENWHPIWNVNDTKHHLYSDINITYVNYYLHQPVAAIFIISYFLIFFLCM 60
 |||||||
 Db 1 MNEKWDTNSENWHPIWNVNDTKHHLYSDINITYVNYYLHQPVAAIFIISYFLIFFLCM 60

 Qy 61 MGNTVVCFIVMRNKHMHVTNLFIILNLAISDLLVGIFCMPITLLDNIIAGWPFGNTMCKI 120
 |||||||
 Db 61 MGNTVVCFIVMRNKHMHVTNLFIILNLAISDLLVGIFCMPITLLDNIIAGWPFGNTMCKI 120

 Qy 121 SGLVQGISVAASVFTLVAIAVDRFQCVVYFPKPKLTIKTAFVIIIMIIWVLAITIMSPSAV 180
 |||||||
 Db 121 SGLVQGISVAASVFTLVAIAVDRFQCVVYFPKPKLTIKTAFVIIIMIIWVLAITIMSPSAV 180

 Qy 181 MLHVQEEKYYRVRLNSQNKTSPVYWCREDWPQEMRKIYTTLFANIIYPLSLIVIMYG 240
 |||||||
 Db 181 MLHVQEEKYYRVRLNSQNKTSPVYWCREDWPQEMRKIYTTLFANIIYPLSLIVIMYG 240

 Qy 241 RIGISLFRAAVPHTGRKNQEWHVVSRRKKQKIIKMLLIVALLFILSWLPLWTLMMMSDYA 300
 |||||||
 Db 241 RIGISLFRAAVPHTGRKNQEWHVVSRRKKQKIIKMLLIVALLFILSWLPLWTLMMMSDYA 300

 Qy 301 DLSPNELQIINIYIYPPFAHWLAFGNSSVNPIIYGFFNENPRRGFQEAFQLQLCQKRAKPM 360
 |||||||
 Db 301 DLSPNELQIINIYIYPPFAHWLAFGNSSVNPIIYGFFNENPRRGFQEAFQLQLCQKRAKPM 360

 Qy 361 EAYALKAKSHVLINTSNQLVQESTFQNPGETLLYRKSAEKPQQELVMEELKETTSSEI 420
 |||||||
 Db 361 EAYALKAKSHVLINTSNQLVQESTFQNPGETLLYRKSAEKPQQELVMEELKETTSSEI 420

SEQ ID NO: 44

SUMMARIES

Result	Query					Description
	No.	Score	Match	Length	DB	
1	2213	100.0	417	21	AAY79377	Rat neuropeptide F
2	1884.5	85.2	405	21	AAY76883	Mouse NPY-Y7 recep
3	1730.5	78.2	420	20	AAW81358	Human 7-transmembr
4	1730.5	78.2	420	21	AAY99930	HLWAR77 polypeptid
5	1730.5	78.2	420	21	AAY79375	Human neuropeptide
6	1728.5	78.1	420	21	AAB07426	Amino acid sequenc
7	1689.5	76.3	408	21	AAY76882	Human NPY-Y7 recep
8	1365.5	61.7	336	20	AAW67774	Partial human 7-tr
9	1365.5	61.7	336	21	AAY99931	HLWAR77 polypeptid
10	1030	46.5	428	21	AAY56887	Human B5 receptor

11	1026	46.4	430	21	AAY93151	Novel human G-prot
12	1026	46.4	430	21	AAY79376	Human neuropeptide
13	1001	45.2	432	21	AAY93146	Novel rat G-protei
14	1001	45.2	432	21	AAY79373	Rat neuropeptide F
15	959	43.3	432	21	AAY56886	Rat B5 receptor po
16	523	23.6	444	20	AAY03649	Human 7-transmembr
17	523	23.6	444	22	AAB61969	Human HCRT2 polyp
18	522	23.6	460	22	AAB61970	Rat HCRT2 polypep
19	521	23.5	444	22	AAB61968	Canine wild-type H
20	508	23.0	431	21	AAY94993	Human secreted pro
21	508	23.0	431	22	AAB74773	Human G protein-co
22	508	23.0	431	22	AAB48963	Human G protein-co
23	506	22.9	431	21	AAY71309	Human orphan G pro
24	506	22.9	431	21	AAB02843	Human G protein co
25	501	22.6	402	17	AAW06124	Neuropeptide recep
26	500	22.6	431	21	AAB02853	Human G protein co
27	499	22.5	425	19	AAW80456	G-protein coupled
28	499	22.5	425	22	AAB67489	Amino acid sequenc
29	499	22.5	425	22	AAB67079	Human HFGAN72 rece
30	498	22.5	381	19	AAW41710	Rhesus monkey neur
31	498	22.5	381	21	AAY56888	Human Y2 receptor
32	493.5	22.3	381	16	AAR78273	Rat hippocampal ne
33	493	22.3	381	16	AAR78271	Human hippocampal
34	492.5	22.3	381	16	AAR78272	Rat hippocampal ne
35	484	21.9	423	19	AAW81460	Human G-protein co
36	483	21.8	423	18	AAW34512	G protein coupled
37	482	21.8	423	18	AAW32797	Human derived long
38	472	21.3	377	17	AAW06126	Neuropeptide recep
39	472	21.3	389	19	AAW80805	Amino acid sequenc
40	469.5	21.2	369	17	AAW06125	Neuropeptide recep
41	464.5	21.0	428	18	AAW29104	Enhanced CCK-A/gas
42	453.5	20.5	428	18	AAW29102	Human peptide horm
43	453.5	20.5	428	22	AAB66630	Human CCK A recept
44	448.5	20.3	430	14	AAR40772	Sequence encoded b
45	448.5	20.3	430	22	AAB66625	Guinea pig CCKA re

ALIGNMENTS

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RESULT 1
AAY79377
ID  AAY79377 standard; Protein; 417 AA.
XX
AC  AAY79377;
XX
DT  01-AUG-2000 (first entry)
XX
DE  Rat neuropeptide FF (NPFF2) receptor.
XX
KW  Neuropeptide FF receptor; NPFF2 receptor; rat; antiinflammatory;
KW  antiasthmatic; antidiabetic; immunostimulant; immunosuppressive;
KW  nootropic; neuroprotective; analgesic; anoretic; antipsychotic;
KW  antiaddictive; antimigraine; hypertensive; hypotensive; cardiant;
KW  antiasthmatic; therapy; G protein coupled receptor.
XX
OS  Rattus norvegicus.
XX
FH  Key          Location/Qualifiers
FT  Domain       44..71
FT                   /note= "transmembrane domain I"
FT  Domain       81..104
FT                   /note= "transmembrane domain II"
FT  Domain       123..141
FT                   /note= "transmembrane domain III"
FT  Domain       161..180
FT                   /note= "transmembrane domain IV"
FT  Domain       220..243
FT                   /note= "transmembrane domain V"
FT  Domain       271..296
FT                   /note= "transmembrane domain VI"

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FT Domain 314..339
FT /note= "transmembrane domain VII"
FT Modified-site 10
FT /note= "N-glycosylated"
FT Modified-site 18
FT /note= "N-glycosylated"
FT Modified-site 113
FT /note= "N-glycosylated"
FT Modified-site 195
FT /note= "N-glycosylated"
FT Modified-site 154
FT /note= "O-phosphorylated"
FT Modified-site 263
FT /note= "O-phosphorylated"
FT Modified-site 264
FT /note= "O-phosphorylated"
XX
PN WO200018438-A1.
XX
PD 06-APR-2000.
XX
PF 24-SEP-1999; 99WO-US22384.
XX
PR 25-SEP-1998; 98US-0161113.
PR 22-FEB-1999; 99US-0255368.
XX
PA (SYNA-) SYNAPTIC PHARM CORP.
XX
PI Gerald CPG, Jones KA, Bonini JA, Borowsky B;
XX
DR WPI; 2000-293017/25.
DR N-PSDB; AAZ94669.
XX
PT Nucleic acid encoding a mammalian neuropeptide FF (NPFF) receptor,
PT useful for treatment of e.g pain, obesity, diabetes, hypertension,
PT hypotension, hypoglycemia, respiratory disorders -
XX
PS Claim 21; Fig 23A-B; 253pp; English.
XX
CC The present sequence is that of rat neuropeptide FF (NPFF2)
CC receptor, as deduced from a cDNA clone (see AAZ94669) isolated
CC from rat spinal cord cDNA. High levels of rat NPFF2 mRNA are
CC found in the central nervous system. Expression patterns suggest
CC roles for NPFF2 in neuroendocrine regulation, and in regulation of
CC circadian rhythm, regulation of appetite and other functions
CC modulated by the hypothalamus. A possible role in regulation of
CC cardiovascular function is also suggested. High levels in the
CC amygdala suggest a role in modulation of mood, fear, phobia and
CC anxiety, and NPFF2 may be a target for treatment of depression and
CC other neuropsychiatric disorders. The invention provides rat
CC and human NPFF polypeptides and polynucleotides, vectors, host
CC cells, antibodies, nucleic acid probes, antisense oligonucleotides,
CC transgenic animals, methods of isolating mammalian NNPF receptors,
CC methods of treating an abnormality associated with NPFF receptor
CC activity, methods of determining binding of compounds to NPFF
CC receptors, methods of identifying agonists and antagonists of NPFF
CC receptors, and the agonists and antagonists obtained. Claimed
CC methods of treating an abnormality that is alleviated by
CC increasing/decreasing NPFF activity involve administering an NPFF
CC receptor agonist/antagonist. The abnormality is a lower urinary
CC tract disorder, an epinephrine release disorder, a gastrointestinal
CC disorder, irritable bowel syndrome, a cardiovascular disorder, an
CC electrolyte balance disorder, diuresis, hypertension, hypotension,
CC diabetes, hypoglycemia, a respiratory disorder, asthma, a
CC reproductive function disorder, an immune disorder, an endocrine
CC disorder, a musculoskeletal disorder, a neuroendocrine disorder, a
CC cognitive disorder, a memory disorder, a sensory modulation and
CC transmission disorder, a motor coordination disorder, a sensory
CC integration disorder, obesity, pain, psychotic behaviour,
CC morphine tolerance, nicotine addiction, opiate addiction,
CC affective disorder or migraine (all claimed).

XX

SQ Sequence 417 AA;

Query Match 100.0%; Score 2213; DB 21; Length 417;
 Best Local Similarity 100.0%; Pred. No. 6e-241;
 Matches 417; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MGKRWDNSSGSWDHIWSGNDTQHPWYSDINITYMNYLHQPHVTAVFISSYFLIFFLCM 60
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 Db 1 mgkrwdnssgswdhiwsndtqhpwysdinitymnylhqphvtavfissysflifflcm 60

Qy 61 VGNNTVVCVFFVIRNRYMHTVTNFFIFNLAIISDLVGIFCMPITLLDNIIAGWPFGSSMCKI 120
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
 Db 61 vgnntvvcvffvirnrymhtvttnffifnlaisdlvgifcmpitlldniiagwpfgssmcki 120

Qy 121 SGLVQGISVAASVFTLVAIAVDRFRCVVYPFKPKLTVKTAFVMIVIIGLAITIMTPSAI 180
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
 Db 121 sglvqgisvaasvftlvaiaavdrfrcvvypfkpkltvktafvmiviiwglaitimtpsa 180

Qy 181 MLHVQEEKKYYRVRLLSHNKTSTVYWCREDWPQNQEMRRIYTTVLFATIYLAPLSLIVIMYA 240
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
 Db 181 mlhvqeeekyyrvrllshnktstvywcredwpnqemrriyttvlfatiyaplslivimya 240

Qy 241 RIGASLFKTSAHSTGKQRLEQWHVSKKKQKVIMLLTVALLFILSWLPLWTLMMMLSDYAD 300
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
 Db 241 rigaslfktsahstgkqrleqwhvskkkqkvimlltvallfilswlplwtlmmmlsdyad 300

Qy 301 LSPNKLRLVINIYVYPFAHWLAFCNSSVNPIIYGFVNENFRSGFQDAFQFCQKKVKPQEAY 360
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
 Db 301 lspnklrlviniyvypfahwlafcnssvnpiiygffnenfrsgfqdafqfcqkkvkpqeay 360

Qy 361 GLRAKRNLIDINTSGLLVHEPASQNPGENLGCRKSADNPTQESLMEETGEATNSTET 417
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
 Db 361 glrakrnldintsgllvhepasqnpsgenlgcrksadnptqeslmeetgeatnstet 417

SUMMARIES

%

Result No.	Query Score	Match	Length	DB	ID	Description
1	498	22.5	381	2	I39187	neuropeptide Y/pep
2	484.5	21.9	449	2	A41738	neuropeptide Y rec
3	477.5	21.6	423	2	B40470	glucocorticoid-ind
4	457.5	20.7	443	2	D40470	glucocorticoid-ind
5	453.5	20.5	428	2	JN0692	cholecystokinin ty
6	448.5	20.3	430	2	I51898	cholecystokinin A
7	448	20.2	444	2	A42685	cholecystokinin re
8	442.5	20.0	436	2	JC5599	cholecystokinin-A
9	439	19.8	427	2	S50150	gastric CCK-A rece
10	438.5	19.8	366	2	S71152	neuropeptide Y/pep
11	438.5	19.8	491	2	C40470	glucocorticoid-ind
12	434.5	19.6	384	2	A45490	neuropeptide Y/pep
13	427	19.3	370	1	I52315	G protein-coupled
14	422	19.1	349	2	S12863	G protein-coupled
15	422	19.1	382	2	B46133	neuropeptide Y/pep
16	421.5	19.0	519	2	S17783	tachykinin recepto
17	421	19.0	382	2	S27388	neuropeptide Y rec
18	409	18.5	384	2	S20303	neurokinin 2 recep
19	408.5	18.5	457	2	T29741	hypothetical prote
20	407	18.4	385	2	S55524	neurokinin 3 recep
21	405.5	18.3	394	2	JC7209	galanin receptor -
22	405	18.3	452	2	A34916	neurokinin 3 recep
23	402	18.2	390	2	A36737	neurokinin 2 recep
24	399.5	18.1	398	1	JQ1059	neurokinin 2 recep
25	395.5	17.9	391	2	T32517	hypothetical prote
26	394	17.8	450	2	A55886	dopamine receptor
27	394	17.8	455	2	T15622	hypothetical prote